

**We Claim**

1. A blade cooling arrangement comprising a blade tip  
5 including a coolant gallery in use upstream of flow  
entrainment means, the gallery including release passages to  
release coolant in use close to the blade tip surface whilst  
the flow entrainment means entrains that released coolant to  
facilitate flow isolation from turbulent air created by a  
10 shroud or leading edge of the blade tip.
2. An arrangement as claimed in claim 1 wherein the  
gallery includes a cavity from which the release passages  
extend.
3. An arrangement as claimed in claim 1 wherein the  
15 release passages extend laterally towards the flow  
entrainment means.
4. An arrangement as claimed in claim 1, wherein the  
release passages have a slight downward inclination towards  
the flow entrainment means and in use project the coolant  
20 flow in that slight downward inclination.
5. An arrangement as claimed in claim 1 wherein the flow  
entrainment means comprises upstanding fins to form channels  
for entrainment of the coolant flow.
6. An arrangement as claimed in claim 5 wherein the fins  
25 extend above the height of the release passages.
7. An arrangement as claimed in claim 5 wherein the fins  
are substantially perpendicular to the blade tip surface.
8. An arrangement as claimed in any of claims 5, 6 or 7  
wherein each fin has substantially the same height.
- 30 9. An arrangement as claimed in claim 5 wherein the fins  
have different heights and/or shapes and/or presentational  
angles relative to the respective release passages for  
specific coolant entrainment as required for a particular  
part of the blade tip dependent upon desired cooling  
35 efficiency and/or blade structural integrity.

10. An arrangement as claimed in claim 5 wherein the fins provide additional contact surface area for enhanced heat transfer to the coolant air flow.
11. An arrangement as claimed in any claim 1 wherein the flow entrainment means define channels through which the coolant flow is driven in use by rotation of the blade tip.
12. An arrangement as claimed in claim 1 wherein the blade tip includes one of ripple strips, trip strips and other heat transfer augmentation features to improve heat transfer between the coolant air flow and the blade tip.
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